

Date: Thu, 28 Jan 93 11:59:06 PST  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #125  
To: Info-Hams

Info-Hams Digest                      Thu, 28 Jan 93                      Volume 93 : Issue 125

Today's Topics:

Burglars are brighter than you might think! (3 msgs)  
    Endurance  
    Experience with MFJ 9020?  
    Future of Ham Radio  
    Ham Radio Causes Cancer!  
    Help with an ICOM IC202S  
HT power supplies - call for preferences (2 msgs)  
    I love/hate Wayne Green!  
    Info needed on 2m & 70cm Satellite connections.  
Using electrical outlet ground as earth ground?????

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

-----

Date: Wed, 27 Jan 1993 18:43:50 GMT  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!linus!linus.mitre.org!mwvm.mitre.org!  
m14494@network.UCSD.EDU  
Subject: Burglars are brighter than you might think!  
To: info-hams@ucsd.edu

Fred Lloyd writes:

>> Beware of the Eavesdroppers...  
> I make it a personal practice NEVER to discuss vacation plans over the air  
> I don't even like to mention the fact that my wife is in the car with me >  
> (meaning that the house is empty

This is all good advice, but very, very scary. What does it say

about the society we've created? Think I'll go get me a big gun!  
No, no, that's not right; George is gone, Bill C. is in the White House. Let's  
see; I'll go get me a sensitive, self-actualized, empowered house cat to guard my  
rig at home. ;-)

Mike, N4PDY

\*\*\*\*\*

\* These are my opinions only.\*

\*\*\*\*\*

-----

Date: 27 Jan 93 19:36:19 GMT

From: saimiri.primate.wisc.edu!news.larc.nasa.gov!grissom.larc.nasa.gov!

kludge@ames.arpa

Subject: Burglars are brighter than you might think!

To: info-hams@ucsd.edu

In article <1993Jan27.184350.5273@linus.mitre.org> m14494@mwvm.mitre.org (Mike  
White) writes:

>Fred Lloyd writes:

>>> Beware of the Eavesdroppers...

>> I make it a personal practice NEVER to discuss vacation plans over the air

>> I don't even like to mention the fact that my wife is in the car with me >

>> (meaning that the house is empty

>

>This is all good advice, but very, very scary. What does it say

>about the society we've created? Think I'll go get me a big gun!

>No, no, that's not right; George is gone, Bill C. is in the White House. Let's  
see; I'll go get me a sensitive, self-actualized, empowered house cat to guard my  
rig at home. ;-)

Nahh, I've got the solution. Try a Collins R-390A, teamed up with a Johnson  
Viking in a nice military steel rack cabinet. I'd just like to see them try  
to steal it. It took six people to lift it up the front steps.

--scott

(security through size and weight)

-----

Date: Thu, 28 Jan 1993 00:57:29 GMT

From: adobe!swirsky@decwrl.dec.com

Subject: Burglars are brighter than you might think!

To: info-hams@ucsd.edu

>In article <1993Jan27.184350.5273@linus.mitre.org> m14494@mwvm.mitre.org (Mike  
White) writes:

>>Fred Lloyd writes:

>>>> Beware of the Eavesdroppers...  
>>> I make it a personal practice NEVER to discuss vacation plans over the air  
>>> I don't even like to mention the fact that my wife is in the car with me >  
>>> (meaning that the house is empty  
>>  
>>This is all good advice, but very, very scary. What does it say  
>>about the society we've created? Think I'll go get me a big gun!  
>>No, no, that's not right; George is gone, Bill C. is in the White House. Let's  
see; I'll go get me a sensitive, self-actualized, empowered house cat to guard my  
rig at home. ;-)

I think you guys are being silly! There are many ways a person can determine  
if a house is occupied, without listening for hams on the radio.

While it's probably not a good idea to discuss your vacation plans on the  
radio, there is absolutely no evidence to link the information  
revealed in the QSO with the break-in.

[ By the way, Mike, my cat was an effective deterrent. If someone came  
to the door, it would run though the house, turning all the motion-sensor  
activated lights on. I used to have a motion-sensor at cat height near my  
inside front entranceway. When I pulled in the driveway, the light always  
went on.]

--

"Duff Beer for Me,  
Duff Beer for You,  
I'll have a Duff Beer,  
You'll have one, too!" -- Duff Gardens Theme Song

-----

Date: 27 Jan 93 09:59:19 EST  
From: saimiri.primate.wisc.edu!sdd.hp.com!ncr-sd!ncrcae!ncrhdb2!ncrgw2!psinntp!  
arrrl.org@ames.arpa  
Subject: Endurance  
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, gary@ke4zv.uucp (Gary Coffman) writes:  
>In article <1k1j57INN3co@emx.cc.utexas.edu> oo7@emx.cc.utexas.edu (Q. Burpington-  
Smythe) writes:  
>>K1MER says:  
>>  
>>>>If you like exciting, adventurous story-telling....that combines the best  
>>>>elements of sci-fi with our beloved radio hobby....you absolutely MUST read  
>>>>"ENDURANCE".....I rate it \*\*\*\* !!!!!  
>>  
>>Are contrary opinions allowed? I thought it was a load of old rubbish :-)

>>The only reason for calling it Endurance is that this is what it takes on  
>>the part of the reader to finish the thing. People must like these QST  
>>stories, they publish them so often, but I find them a real waste of paper.  
>

>I thought the connection to amateur radio was thin. The writing was of  
>good quality, but I wondered as I read it if it's 4 pages couldn't have  
>been put to a better use carrying an article like N6NWP presented in the  
>same issue. That's the sort of thing I expected of \_Ham Radio\_ (sniff)  
>and want to see more of in QST.

I don't have a problem with the inclusion of nontechnical stuff.  
But I thought this particular article was mawkish and trite--that's  
why \*I\* wonder if its 4 pages couldn't have been put to better use.

-----

Jon Bloom, KE3Z	jbloom@arrl.org
American Radio Relay League	Justice is being allowed to do whatever
225 Main St.	I like. Injustice is whatever prevents
Newington, CT 06111	my doing so. -- Samuel Johnson

-----

Date: Wed, 27 Jan 1993 19:33:56 GMT  
From: pacbell.com!sgiblab!spool.mu.edu!uwm.edu!rpi!news.ans.net!malgudi.oar.net!  
news.ysu.edu!yfn.ysu.edu!ag821@network.UCSD.EDU  
Subject: Experience with MFJ 9020?  
To: info-hams@ucsd.edu

In a previous article, sk7897@sarah.albany.edu (KRUMKE SVEN O) says:

>Hi, my question is simple and short:

>

>Is there anybody who has made experience with the MFJ9020 QRP rig?

>

>Having thought about buying one, I would appreciate any comment  
>very much.

>

>Thanks and 73 de Sven

>

Hi,

I have used the 9020 backpacking, mobile, and at my home QTH.

I liked it so much I wrote an article for QST about  
some of my experiences with it (FEB QST 1993..new section).

The filtering is great, the rig continually gets me good  
reports from other stations. I have worked all over the  
world and the country with it on a portable dipole. Very small

rugged, and very easy to use. No problem plugging it into a cigarette lighter and using it mobile with a Hustler vertical.

I had one of the earlier rigs. The audio was a little weak, and after I had it out in the car for a few months during very cold WX, the sidetone went a little crazy and it drifted. I sent it back to MFJ the week before christmas. shortly after I got a note saying it had been received, and it could take up to 4 weeks to return to me. the week after Christmas my rig was returned (about 7 days) They had changed out a number of components put in a bigger speaker and new top case. I figured that they must have updated mine. It has been working great since I got it back. I was very pleased with the warranty service.

I added the internal keyer and it works very well. The audio isn't real strong, but certainly acceptable.

This little rig is one of my favorite toys. I have it sittintg next to my Yaesu 757 which can do QRP and works great. Most nights I use the MFJ.. I picked up a mini straight key at the last ham fest and can leave the paddles (homemade) and the straight key hooked in all the time.

I love it. I feel it was certainly worth the money.  
73s

Jeff, AC4HF

--

Jeff M. Gold, AC4HF  
Manager, Academic Computing Support  
Tennessee Technological University

-----  
Date: Wed, 27 Jan 1993 19:07:13 GMT  
From: pacbell.com!att-out!cbfsb!cbnews!cbnewsm!jeffj@network.UCSD.EDU  
Subject: Future of Ham Radio  
To: info-hams@ucsd.edu

With all the ravings about Nocode pro and con I started thinking about the future of Ham Radio. With the HUGE influx of the Nocode Techs the hobby is now growing at about 10% per year. This translates out to the hobby growing from the current level of 600,000 hams to about 1.2 million in 7 years. Like anything it will slow down it's growth after a while. What does this all mean? The market for new and used gear will explode! There will be more manufacturers producing gear and as much as some people oppose this, prices will finally drop! As the market for 2 meter gear has shown when competition arrives, prices start to drop or more features are

added for the same price. In recent Ham Radio magazines there are appearing more and more new advertisements for various niches of the market. Heathkit pulled out of the market (bright move that) but it's been amazing how many new companies have poured in to take it's place. JCOM has just brought out a series of new QRP SSB 2 watt single band transceivers that are \$349.95 for 6 thru 80 meters. They also have a 10 watt linear available. Can't afford the high priced HF rigs? Get one of these. Interesting to see DSP products showing up now and once others start showing up prices should drop there also. As the market grows and grows at it's current rate Ham Radio magazines might even start looking like some of the Japanese 2 inch thick Ham Radio Magazines. Drake bought out a new HF receiver for the market and Atlas bought out a new low priced HF transceiver so some of the old boys are showing up again! The Nocode tech is what is driving all this and as such Ham Radio should be thankfull for this new license! Any comments anyone? 73!

Jeff

--

Jeff Jones AB6MB | Hooker : I'll do anything for \$50!  
jeffj@seeker.mystic.com | Henny Youngman: Will you paint my house?  
Infolinc BBS 415-778-5929 |

-----  
Date: Tue, 26 Jan 1993 15:21:34 GMT  
From: spsgate!mogate!newsgate!usenet@uunet.uu.net  
Subject: Ham Radio Causes Cancer!  
To: info-hams@ucsd.edu

Speaking of ham radio and cancer, I'm sure many of you have seen the news coverage of the lawsuit accusing cellular phones of causing cancer. I saw a report of it last night on NBC. I must say, I have seldom seen a more inaccurate and misleading report. Showing people using cordless phones (implying they were cellular phones) was bad enough, but claiming that cellular phones emit 'high energy microwaves just like microwave ovens' was too much. I guess it's a bit naive to expect accurate coverage of something as technical as cellular phone technology but one would think they would at least make the attempt.

73... Mark AA7TA

-----  
Date: Wed, 27 Jan 93 11:58:11 GMT  
From: elroy.jpl.nasa.gov!usc!sol.ctr.columbia.edu!The-Star.honeywell.com!umn.edu!  
uum1!kksys.com!edgar!brainiac!moron!chrisc@ames.arpa  
Subject: Help with an ICOM IC202S  
To: info-hams@ucsd.edu

mike@imcldn.demon.co.uk (Michael P Simkins) writes:

> Does anybody know what the mike pinouts are, or the crystals to be used for  
> the 'A' and 'B' positions.

>

> -----

Mike,

mic socket: Pin 1 mic i/p  
                  2 ptt  
                  3 n/c  
                  4 ground

The crystals depend on you! Icom had 6 standard crystal options, two of which were installed (144.0-144.4). I will guess that you want 144.4 to 144.6 (mixed-mode) and 145.8-146.0 (space comms).

Well, I'll just post all of the optional crystals that Icom made:

Centre QRG	Fundamental QRG
144.5	14893.28 kHz
144.7	14915.50 kHz
144.9	14937.72 kHz
145.9	15048.83 kHz

All are type HC-25u, and CL = 20pF (load capacitance).

Note that Icom state you will probably need to realign a number of stages if you install the crystal for the top 200 kHz of the band, in addition to the frequency determining caps/coil.

Good Luck!

Chris, W0/G4JEC

(EN34ju - for when you get it going on EME - me too for that matter :-))

--

73 Chris Cox W0/G4JEC

chrisc@biggus.g4jec.tcman.ampr.org      chrisc@biggus.moron.vware.mn.org

Eleventh Hour Contest Group - North American Chapter; Minneapolis, MN

Twin Cities Metro Area Network node (biggus.g4jec.tcman.ampr.org)

-----

Date: Wed, 27 Jan 1993 18:42:30 GMT

From: dog.ee.lbl.gov!overload.lbl.gov!agate!spool.mu.edu!uwm.edu!linac!unixhub!  
slcsrv.slac.stanford.edu!gregs@network.UCSD.EDU

Subject: HT power supplies - call for preferences

To: info-hams@ucsd.edu

Being a new HT owner, I have a general question to ask regarding personal preferences for HT power supplies. I have an Alinco DJ-580 with the standard 7.2V NiCad rechargeable pack which allows me up to 2W output. However, I've noticed that even without transmitting my battery only lasted a few hours (maybe 5). That seemed unreasonably short for not even transmitting, as I was expecting something along the lines of twice that \*with\* intermittent transmit. Of course then, I am new to the HT world.

So my question is this - to the experienced HT users out there, what are your preferences for power supplies? Of course a great solution is to get a link to my cigraette lighter for 12V and full output power (5W) and a great supply. Also, there are AA dry-cell (6) packs for AA NiCad rechargeables or alkalines - which I am definitely getting as soon as it comes back in stock at my local ham shop, though they still provide only 7-9V and hence little if no improvement over my 7.2V NiCad pack (rechargeability-in-the-field issues aside).

There also is the 12V NiCad rechargeable pack offered by Alinco, which is bulkier and costs \$65, but would power my HT up to 5W and provide me with a longer supply of power than my 7.2V pack. Furthermore, I have heard good things from some hams about the Quantum 12V ham power supply - the same company that makes them for camera equipment. The Quantum pack may be a lot of dead weight, and at \$145 isn't the cheapest available, but I hear it is by far the strongest and most reliable battery supply available - however there are tradeoffs and practicality issues (eg. - when is an HT loaded down to where it is hardly a portable HT anymore?, etc...)

Please post or e-mail me your responses to: gregs@slc.slac.stanford.edu.

Thanks and 73 -

greg, KD6QPY  
gregs@slc.slac.stanford.edu

-----

Date: Wed, 27 Jan 1993 22:31:42 GMT  
From: usc!sol.ctr.columbia.edu!destroyer!cs.ubc.ca!fs1.ee.ubc.ca!  
niallp@network.UCSD.EDU  
Subject: HT power supplies - call for preferences  
To: info-hams@ucsd.edu

In article <1993Jan27.104230.1@slcslac.stanford.edu>  
gregs@slcslac.stanford.edu writes:  
>Being a new HT owner, I have a general question to ask regarding personal  
>preferences for HT power supplies. I have an Alinco DJ-580 with the



```
>standard 7.2V NiCad rechargeable pack which allows me up to 2W output.
>However, I've noticed that even without transmitting my battery only lasted
>a few hours (maybe 5). That seemed unreasonably short for not even
>transmitting, as I was expecting something along the lines of twice that
>*with* intermittent transmit. Of course then, I am new to the HT world.
>
> [etc ...]
```

The best parameter to evaluate how long a battery will last is its capacity (typically measured in mAHr or AHr), not the pack voltage. I have found for various Icom rigs (2AT, 2SA, 2GAT) that a 300 mAHr pack lasts from 8-10 Hr if the battery saver is enabled, mainly listening, with maybe 5% Tx. Using high or low power makes little difference at this low duty cycle.

Getting a high voltage pack seems like quite a waste to me, as it typically halves the battery capacity and the extra 3-4 dB of power very seldom makes a difference. For long life on my 2GAT I use a hi-density BP8 (1200 mAHr, 8.4 V) which lasts 40-50 hours use, while for a more convenient size, I use a 600 mAHr, 7.2 V BP2.

Most of the time, the best battery to use is the smallest one that will last a day (though it is a good idea to have a spare somewhere!). Giant packs and external supplies just turn a convenient handheld into a poorly performing mobile.

```
--
- - - - -
Niall Parker                niallp@ee.ubc.ca
UBC Electrical Engineering   or   VE7HEX@VE7UBC.#VANC.BC.CAN.NOAM
```

Date: Wed, 27 Jan 1993 19:21:14 GMT  
From: pacbell.com!sgiblab!spool.mu.edu!uwm.edu!linac!att!cbnewsm!  
jeffj@network.UCSD.EDU  
Subject: I love/hate Wayne Green!  
To: info-hams@ucsd.edu

As soon as I get my new issue of 73 magazine I sit down and open it up to Wayne Green's editorial! I always enjoy reading what he has to say and even if I don't agree with him it makes for a good read. Wayne and I are on different ends of the political spectrum but he still makes a lot of sense at times. He always gives you the impression that if he was in charge the world would be a perfect place and that K1MAN and the mess on 14.313 would be in a deep dark hole somewhere. He always me think. By the way 73 magazine seems to be getting really focused on construction

articles which I really like! He also just wrote that he had his circulation audited by ABC while none of the other mag's would do that and that those others might be fudging a abit on their circulation numbers. Interesting... Anyone have any comments on all this? 73!

Jeff

--

Jeff Jones AB6MB | Hooker : I'll do anything for \$50!  
jeffj@seeker.mystic.com | Henny Youngman: Will you paint my house?  
Infolinc BBS 415-778-5929 |

-----  
Date: 27 Jan 93 09:27:23 EST  
From: news.acns.nwu.edu!zaphod.mps.ohio-state.edu!sol.ctr.columbia.edu!  
howland.reston.ans.net!usc!cs.utexas.edu!sdd.hp.com!ncr-sd!ncrcae!ncrhub2!ncrgw2!  
psinntp!arrl.org@network.UCSD.EDU  
Subject: Info needed on 2m & 70cm Satellite connections.  
To: info-hams@ucsd.edu

>Also is it difficult (or possible) to DX on 2m and 70cm using repeaters or  
>satellites  
>

It most certainly is, Jose! While I'm not a DX'er by any stretch of the imagination, I do in fact enjoy collecting QSL cards from DX stations that I've worked on the various Amateur Radio satellites.

In fact, I just received a card from HS1JC in Thailand for a Fuji-OSCAR-20 contact that we had last month.

There's LOTS of DX on the satellites, and it's entirely possible to work well over a hundred countries via the satellites now.

By the way, the ARRL has recently changed its VUCC program so that satellite contacts are allowed. That makes the chasing of grid squares on satellites an attractive and exciting aspect of Amateur Radio operation.

			Deputy Manager, Field Services, ARRL.
		____	The ARRL Amateur Radio Emergency Service, the ARRL
	uck		National Traffic System, The Amateur Auxiliary to
-----			the FCC's Field Operations Bureau, the ARRL
	KY1T		Field Organization and the ARRL Monitoring System.

-----  
lhurder@arrl.org Prodigy - MGTS39A, BIX - ARRL,

MCI Mail - RPALM, MCI Mail - "ARRL HQ", America On Line - "ARRL HQ"  
Compuserve - 70007,3373 (ARRL HQ) -- Genie ARRL.HQ

-----  
Date: Wed, 27 Jan 1993 18:59:51 GMT  
From: panix!oppedahl@nyu.arpa  
Subject: Using electrical outlet ground as earth ground?????  
To: info-hams@ucsd.edu

In <1993Jan27.113234.5504@klaava.Helsinki.FI> stickler@klaava.Helsinki.FI (Patric M Stickler) writes:

>Does the ground socket of an electrical outlet provide a good (or at  
>least reasonable) path to earth ground? I.e. would I be able to hook  
>up a three prong grounded plug with the two hot prongs removed in  
>order to connect my rig to earth ground via the electrical outlet?

The problem with using the ground terminal of the electrical outlet as a transmitter ground is that while an ohmmeter may show the ground terminal to be identical to a pipe driven into the ground, at RF frequencies the two are not identical. The quarter mile of wire between your ground terminal and a "real" ground, such as a pipe, goes around corners and is not very thick. It has portions that act like inductors, portions that act like capacitors, and portions that act like antennas.

You can try it and see, of course. If it works then who cares? And if you are on the sixth floor of a building it may be your only choice. But a wire as thick as a car-battery cable running from your rig to a pipe in the ground is better.

--  
Carl Oppedahl AA2KW (intellectual property lawyer)  
30 Rockefeller Plaza  
New York, NY 10112-0228  
voice 212-408-2578 fax 212-765-2519

-----  
Date: 27 Jan 93 18:00:33 GMT  
From: usc!howland.reston.ans.net!spool.mu.edu!hri.com!noc.near.net!gateway!miki!wpns@network.UCSD.EDU  
To: info-hams@ucsd.edu

References <1993Jan21.183435.1083@ryn.mro4.dec.com>,

<FOROZCO.93Jan22173548@dante.nmsu.edu>, <lm8cvkINN9c3@news.bbn.com>  
Subject : Re: illegals (was: Re: Radio Shack Business Band Radio)

In article <lm8cvkINN9c3@news.bbn.com> levin@bbn.com (Joel B Levin) writes:  
>It may be that the employee is a licensed ham (or less good, but  
>possible, some other employee on premises). The manager of the store  
>I visit most frequently is a long time ham. If said ham is around he  
>or she may act as control operator while anyone with our without a  
>license uses the radio.

Yabut don't you still have to use the call somewhere in the QSO? In  
the original message I don't recall the salesperson doing any ID...

Willie Smith  
wpns@pictel.com

--

Willie Smith wpns@pictel.com N1JBJ@amsat.org "I'll make  
Beelyuns and Beelyuns from the book contract and the TV show with  
government funding for looking for the nothing in the void where The  
Bang caused the hole in the middle of it all" Frank Hayes - Cosmos.

-----

Date: 27 Jan 93 23:26:02 GMT  
From: eram!dave@midway.uchicago.edu  
To: info-hams@ucsd.edu

References <ZZjls\*Ru0@lemsys.UUCP>, <C1E2nu.GA3@anomaly.sbs.com>,  
<C1E5M4.HvK@anomaly.sbs.com>nasa.  
Subject : Re: Real NoCodes

Instead of this childish name-calling, why don't we have a bit of fun  
instead, and turn the list around? Something like:

-----

Real OldFarts think CW is the only efficient means of communications,  
even though advances in DSP technology have long since overtaken them.

Real OldFarts think that CW ought to be retained, because one day you  
will need it to join two wires together following an aircraft crash.

Real OldFarts think that CW will never die out, even though they are just  
about the only people still using it on a regular basis.

Real OldFarts think that CW is the only way to pass traffic, satellites  
and wormholes etc notwithstanding.

Real OldFarts believe that everybody ought to do CW, because \_they\_ did.

-----

I'm sure we could think up a few more... And how about "Real Extras ..." ?

--

Dave Horsfall (VK2KFU)  
dave@esi.COM.AU

VK2KFU @ VK2RWI.NSW.AUS.OC  
...munnar!esi.COM.AU!dave

-----

Date: Thu, 28 Jan 1993 01:09:14 GMT

From: usc!howland.reston.ans.net!bogus.sura.net!darwin.sura.net!gatech!concert!  
samba!usenet@network.UCSD.EDU

To: info-hams@ucsd.edu

References <1k24r4\$efm@agate.berkeley.edu>,  
<1993Jan27.005128.27486@samba.oit.unc.edu>,  
<weaverb.728109078@rintintin.Colorado.EDU>

Subject : Re: Larsen "kulduckie" w/ HT - is it worth it?

Subject : Re: Larsen "kulduckie" w/ HT - is it worth it?

[info on Diamond RH-77B sucking deleted]

Your mileage may vary.. I've got an Icom dual band antenna (same  
one supplied w/W2A) and while it works well, it doesn't even come  
close to the Diamond. Maybe you were in a strong signal area  
and had desense problems with the Diamond antenna installed.

-ks

KD6RCT

--

The opinions expressed are not necessarily those of the University of  
North Carolina at Chapel Hill, the Campus Office for Information  
Technology, or the Experimental Bulletin Board Service.  
internet: laUNCHpad.unc.edu or 152.2.22.80

-----

End of Info-Hams Digest V93 #125

\*\*\*\*\*